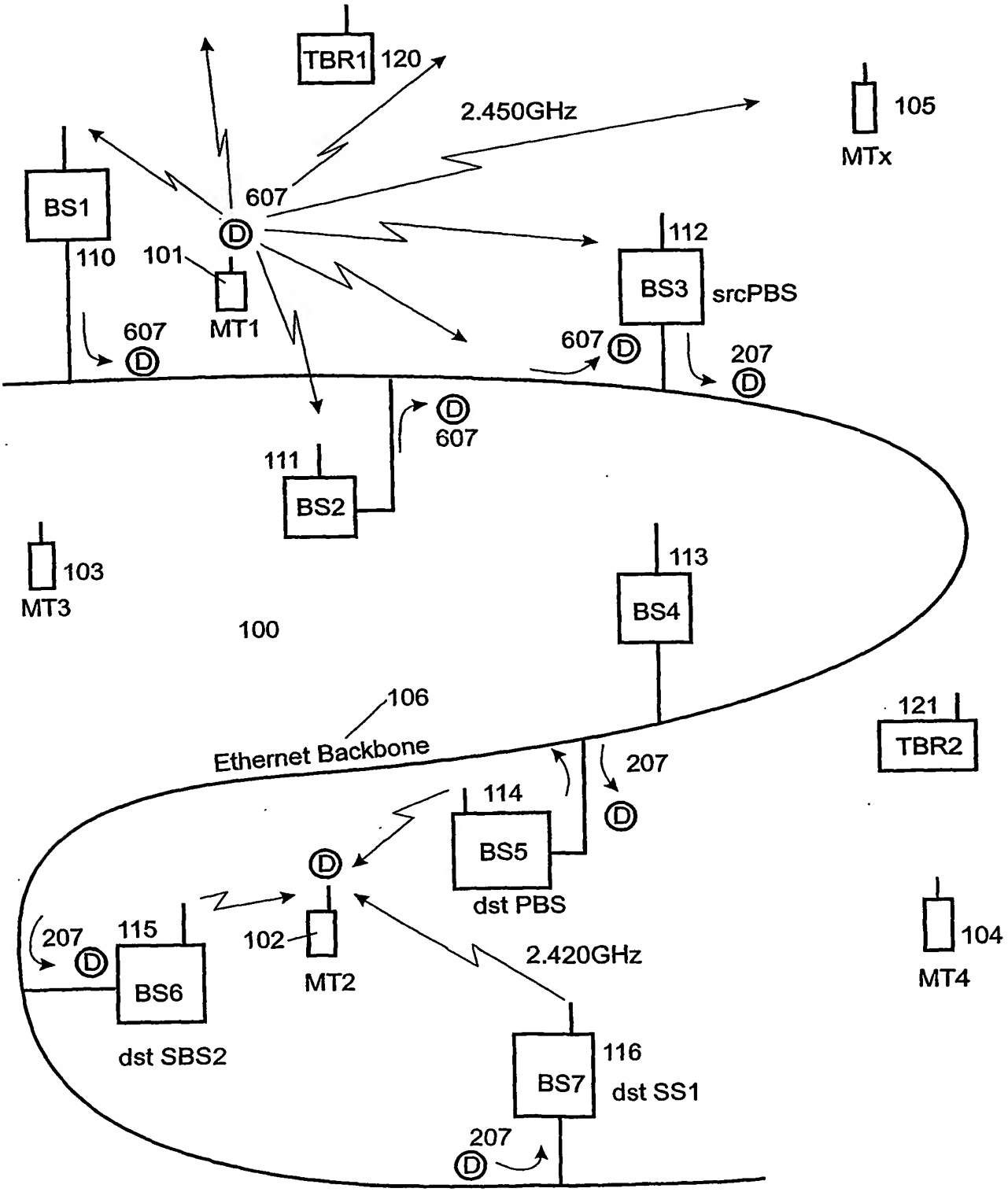

TBR1
120
2.450GHz
105
MTx
BS1
607
110
101
MT1
112
BS3
srcPBS
607
607
207
111
BS2
607
103
MT3
100
113
BS4
106
Ethernet Backbone
121
TBR2
207
114
BS5
dst PBS
207
115
102
MT2
2.420GHz
104
MT4
BS6
dst SBS2
116
BS7
dst SS1
207

FIGURE 1

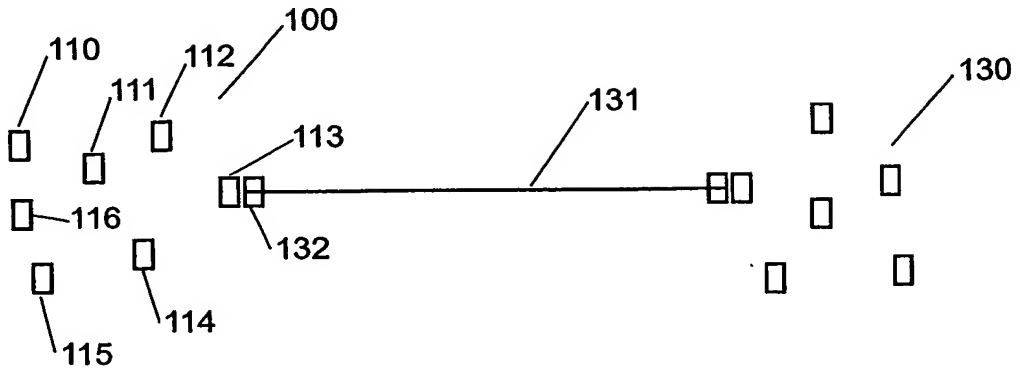


FIGURE 2

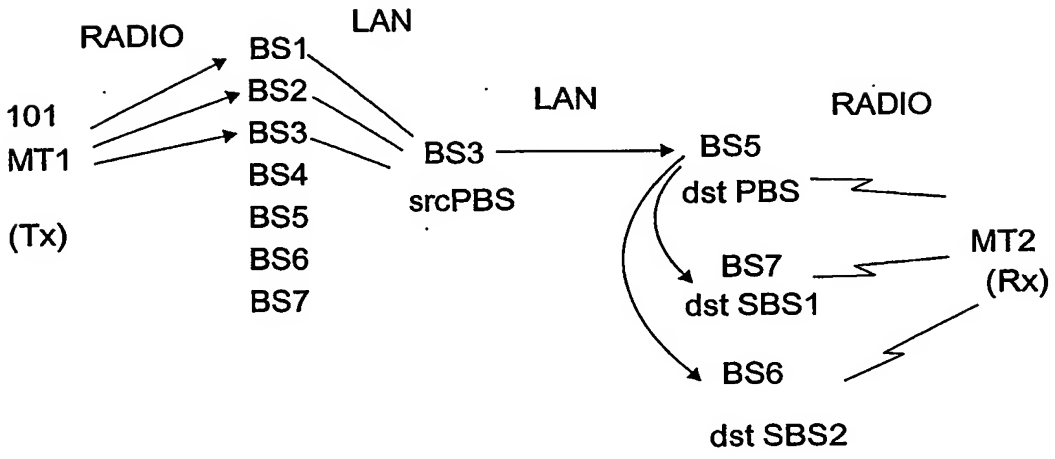


FIGURE 3

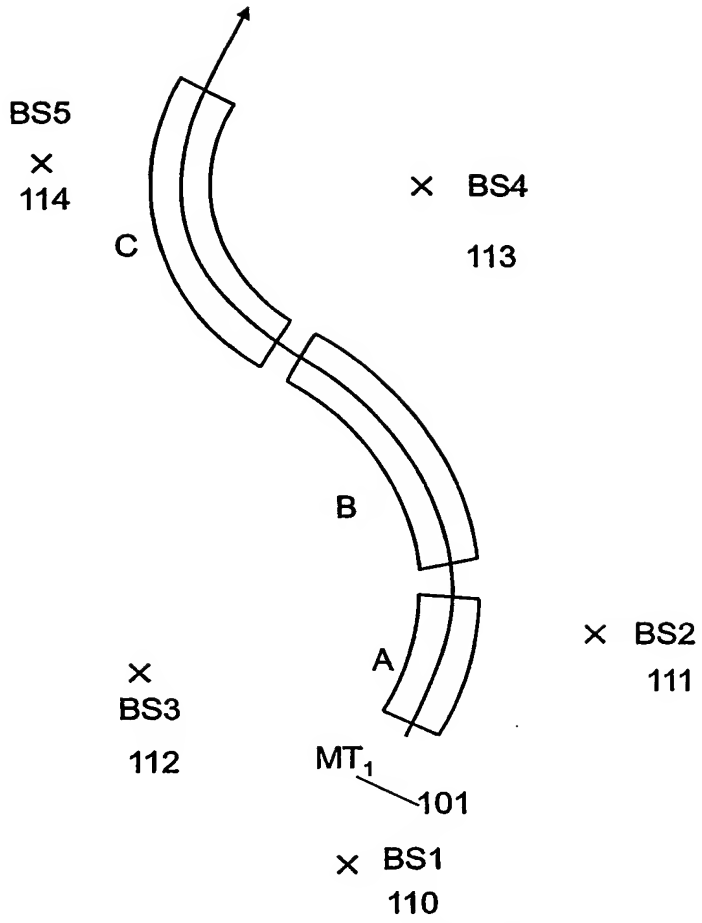


FIGURE 4a

	Src PBS	dst PBS	dst PBS_1	dst PBS_2
A	BS1	BS1	BS2	BS3
B	BS2	BS4	BS2	BS3
C	BS4	BS3	BS4	BS5

FIGURE 4b

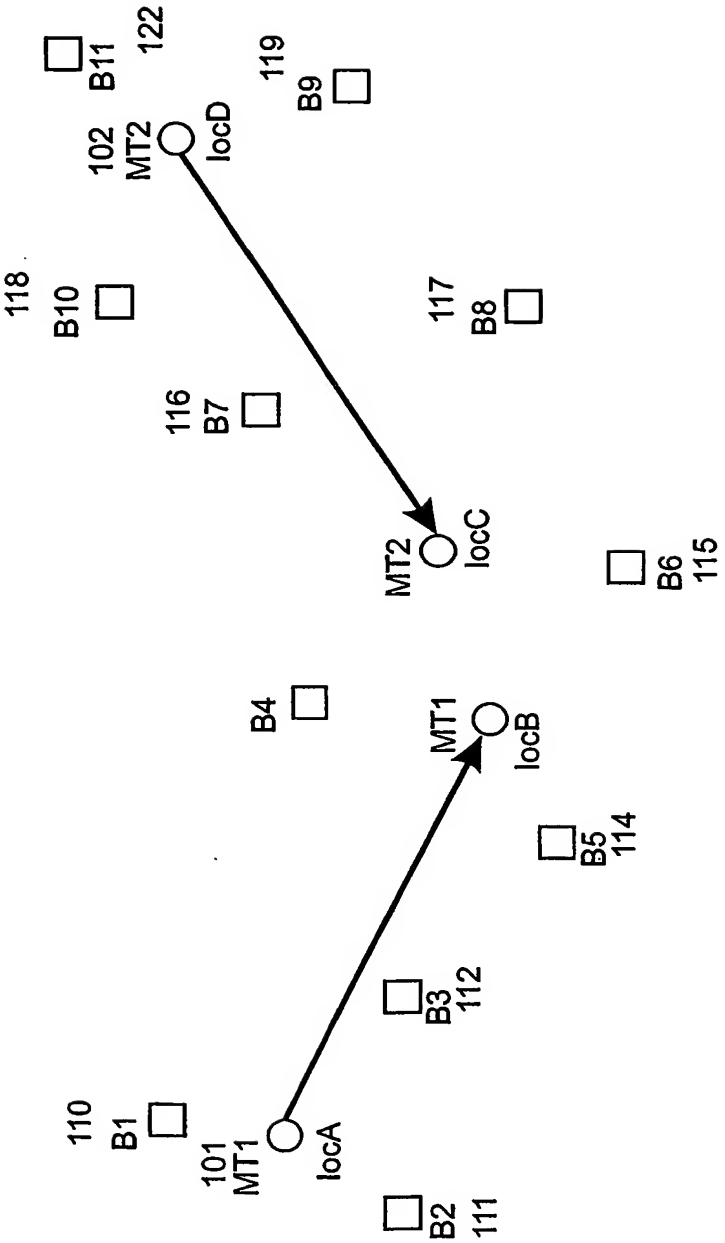

122
B11
119
B9
102
MT2
locD
118
B10
117
B8
116
B7
MT2
locC
B6
115
B4
MT1
locB
B5
114
B3
112
110
B1
101
MT1
locA
B2
111

FIGURE 5

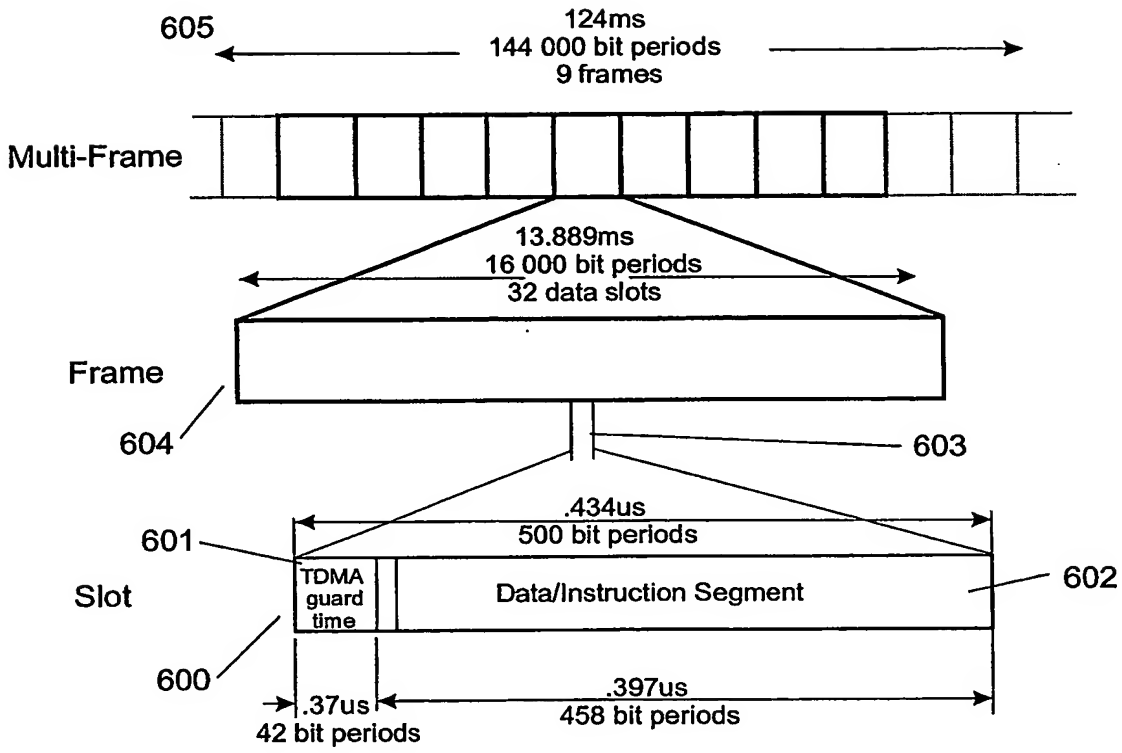

605
124ms
144 000 bit periods
9 frames
Multi-Frame
13.889ms
16 000 bit periods
32 data slots
Frame
604
603
.434us
500 bit periods
601
Slot
TDMA guard time
Data/Instruction Segment
602
600
.37us
42 bit periods
.397us
458 bit periods

FIGURE 6a

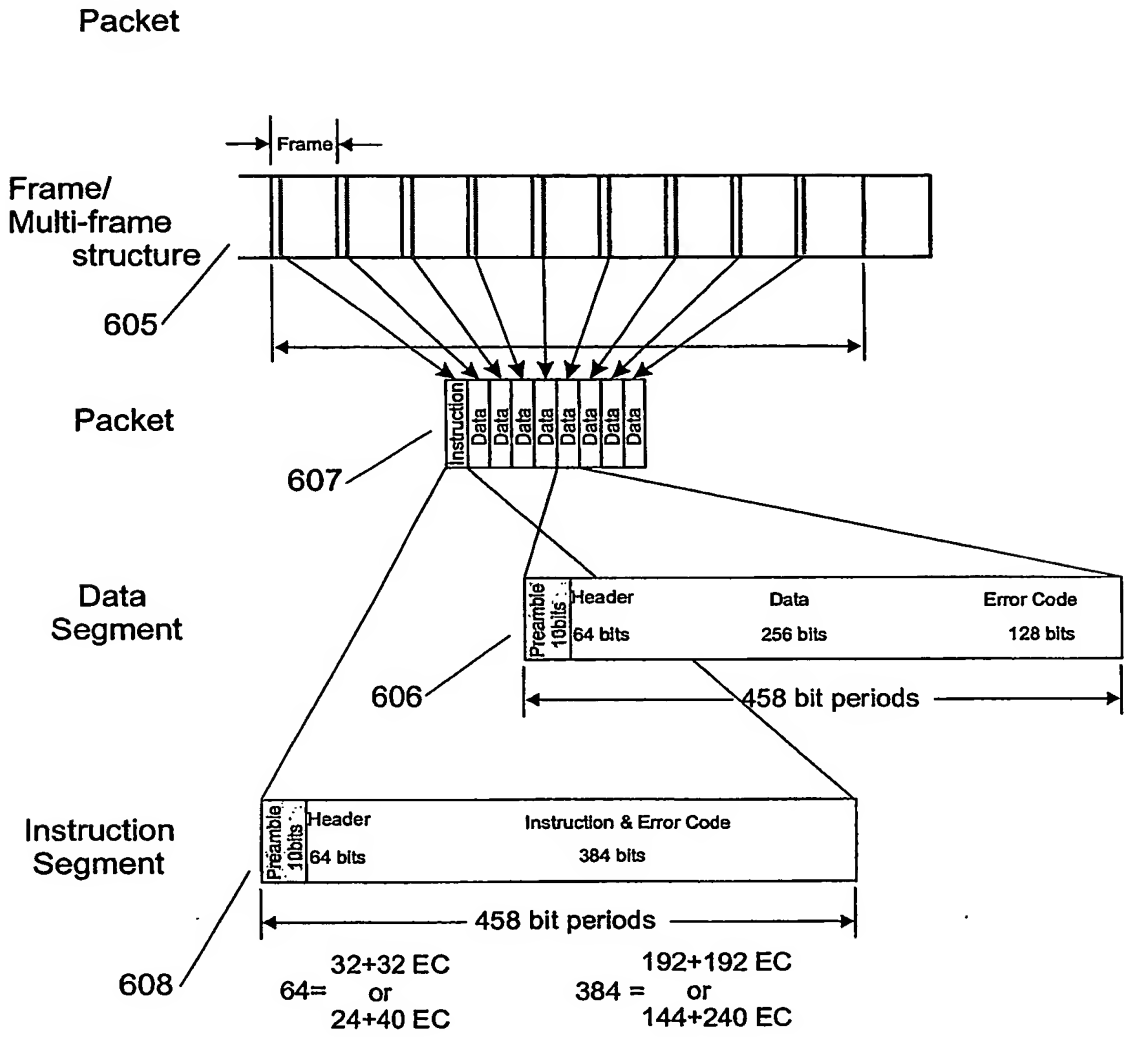

Packet
Frame
Frame/
Multi-frame
structure
605
Packet
607
Instruction
Data
Data
Data
Data
Data
Data
Data
Data
Data
Data
Segment
606
Preamble
10bits
Header
64 bits
Data
256 bits
Error Code
128 bits
458 bit periods
Instruction
Segment
608
Preamble
10bits
Header
64 bits
Instruction & Error Code
384 bits
458 bit periods
64=
32+32 EC
or
24+40 EC
384 =
192+192 EC
or
144+240 EC

FIGURE 6b

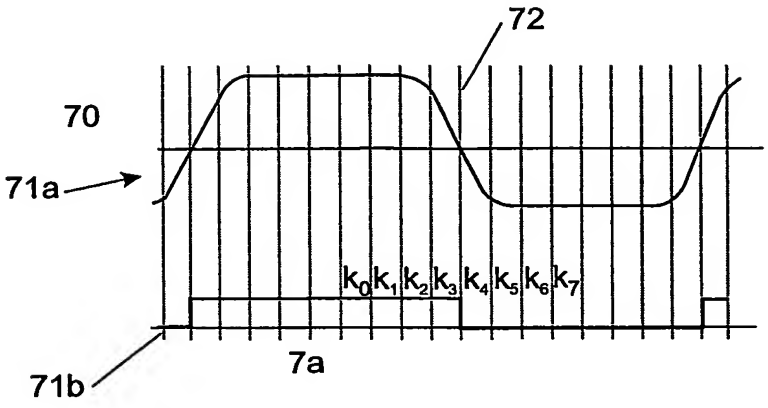


FIGURE 7a

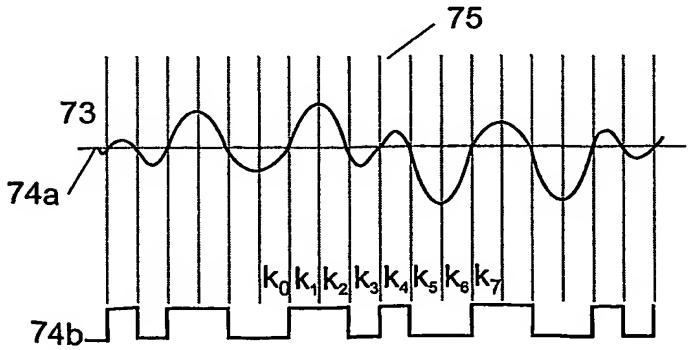
FIGURE 7b

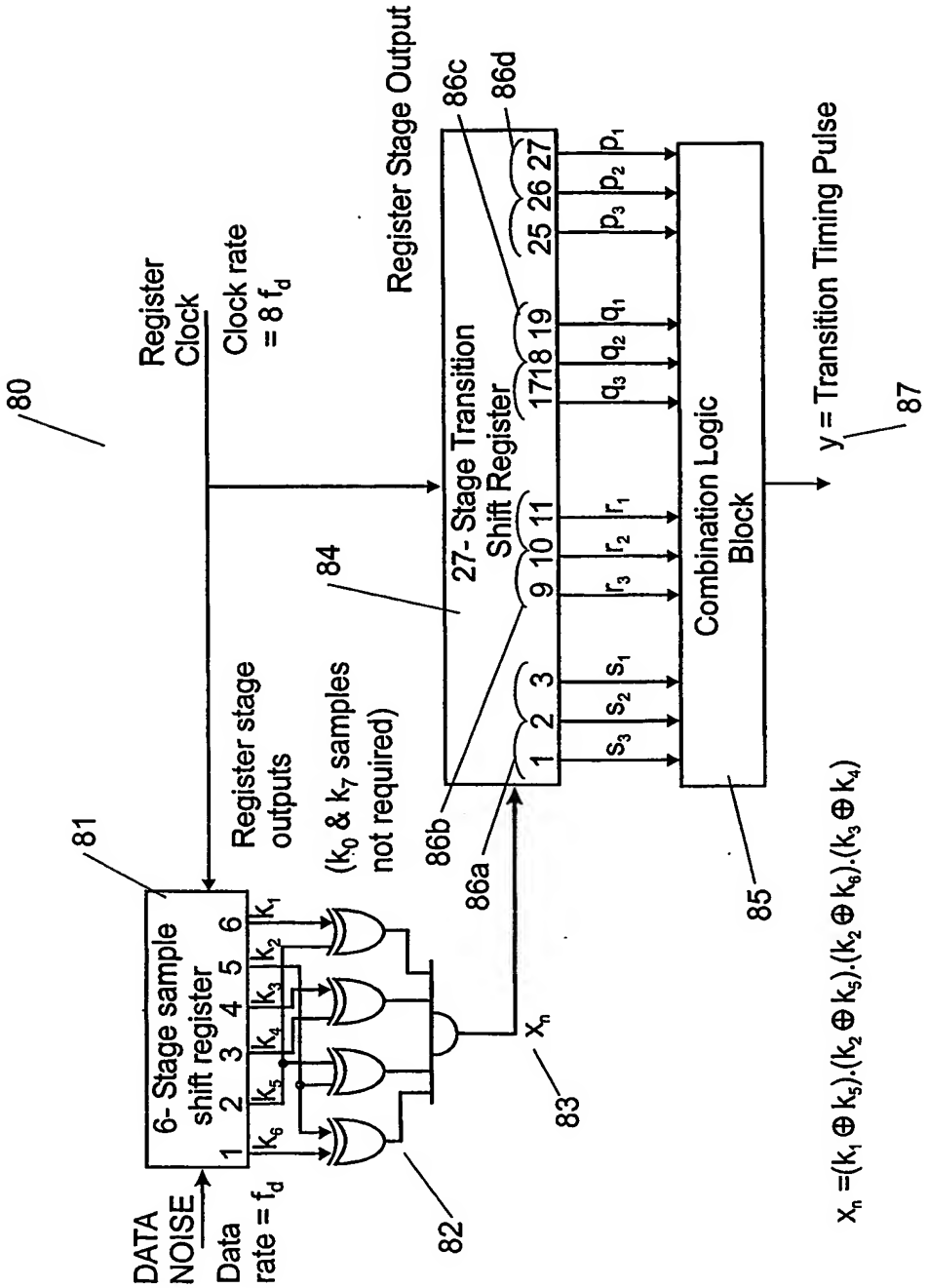
Truth Table

k_0	k_1	k_2	k_3	k_4	k_5	k_6	k_7	x_n
x	1	1	1	0	0	0	x	1
x	1	1	0	1	0	0	x	1
x	0	0	0	1	1	1	x	1
x	0	0	1	0	1	1	x	1
x	ELSE						x	0

'X' Don't Care

FIGURE 7c





Fast Symbol Timing System Block Diagram

FIGURE 8

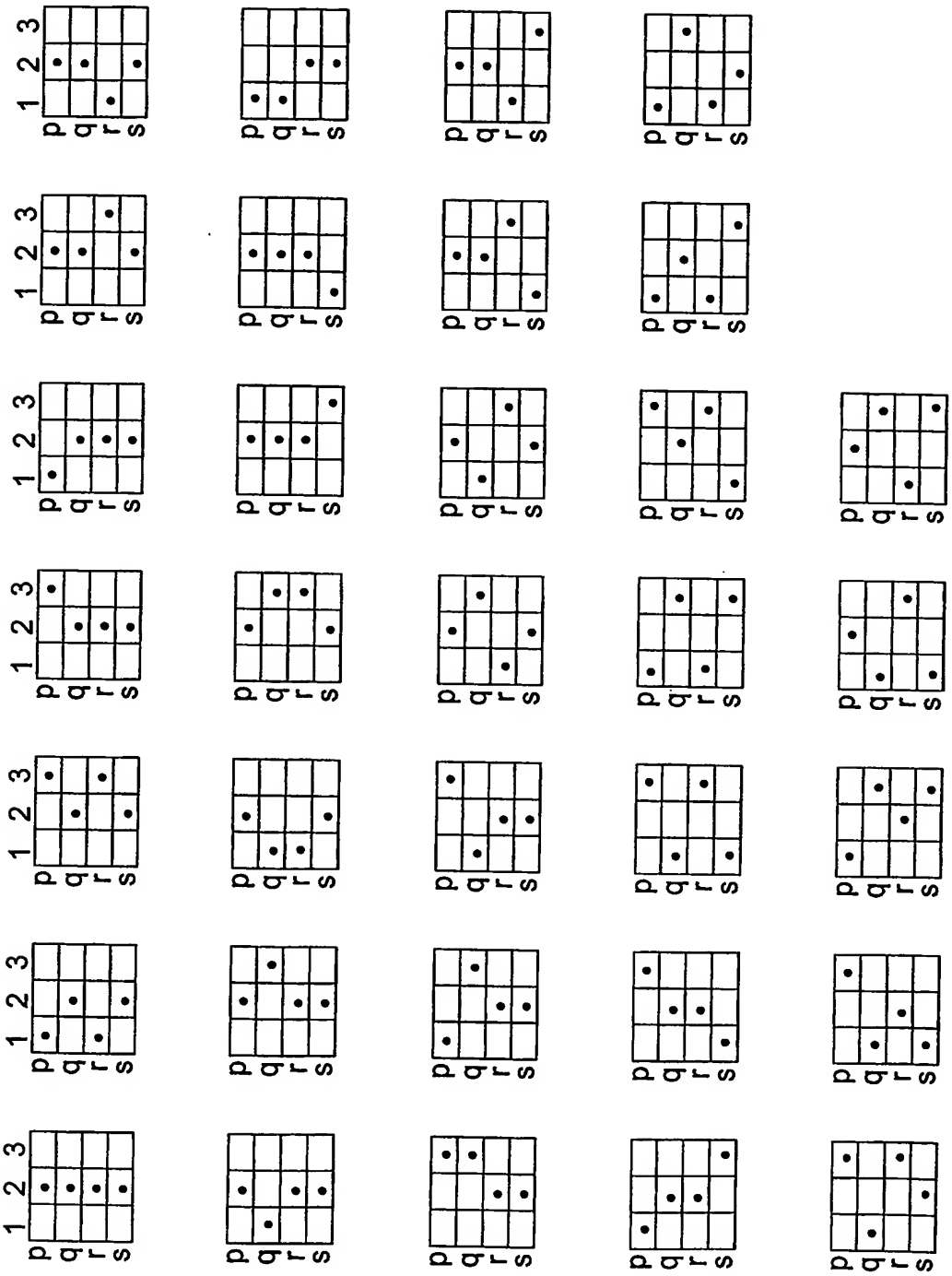


FIGURE 9a

$$y = (q_2 S_2)(p_1 r_1 + p_2 r_2 + p_3 r_3 + p_2 r_1 + p_2 r_3)$$
$$+(q_1 s_2)(p_2 r_1 + p_1 r_2 + p_3 r_2 + p_2 r_3 + p_2 r_2 + p_3 r_3)$$
$$+(q_3 s_2)(p_2 r_2 + p_2 r_3 + p_3 r_2 + p_1 r_2 + p_2 r_1 + p_1 r_1)$$
$$+(q_2 s_3)(p_2 r_2 + p_2 r_1 + p_1 r_2 + p_1 r_1)$$
$$+(q_2 s_1)(p_2 r_2 + p_2 r_3 + p_3 r_2 + p_3 r_3)$$
$$+(q_1 s_1)(p_3 r_3 + p_3 r_2 + p_2 r_3)$$
$$+(q_3 s_3)(p_1 r_1 + p_1 r_2 + p_2 r_1)$$

FIGURE 9b

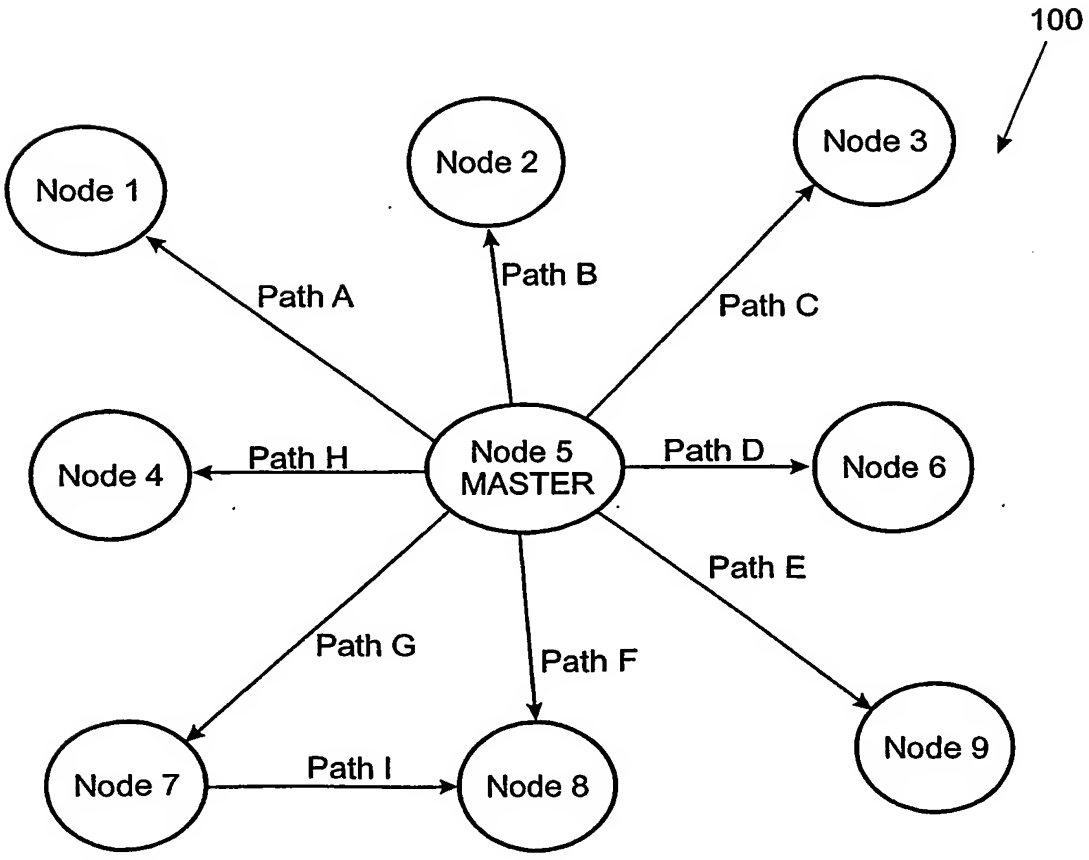


FIGURE 10a

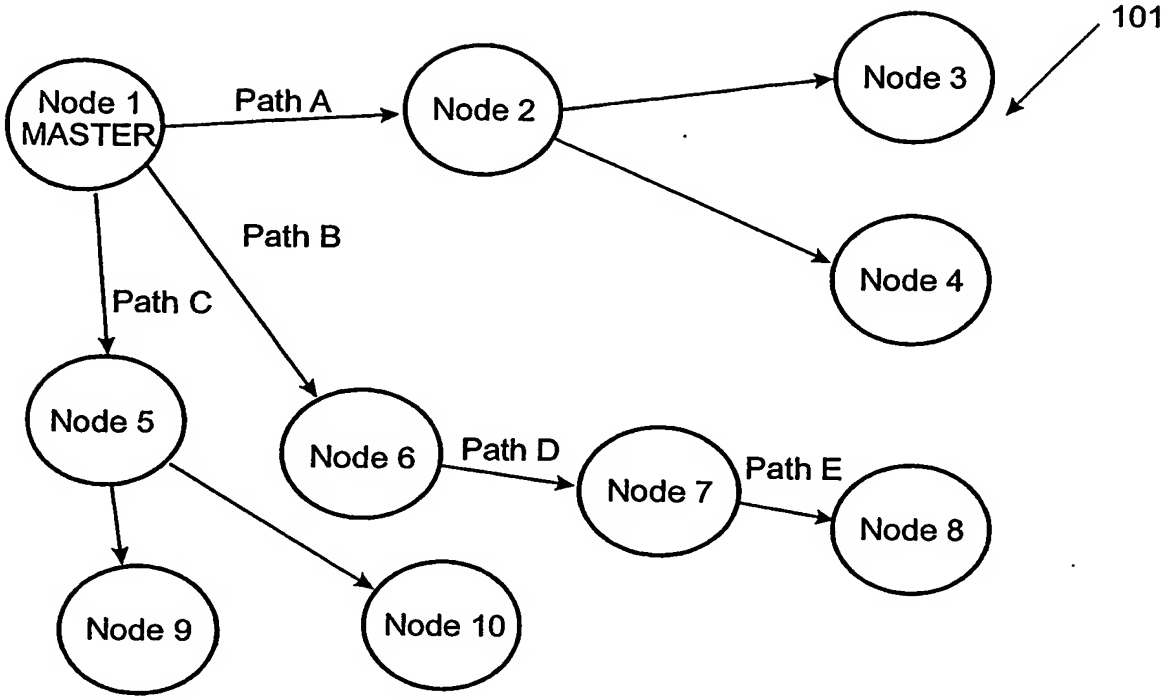


FIGURE 10b

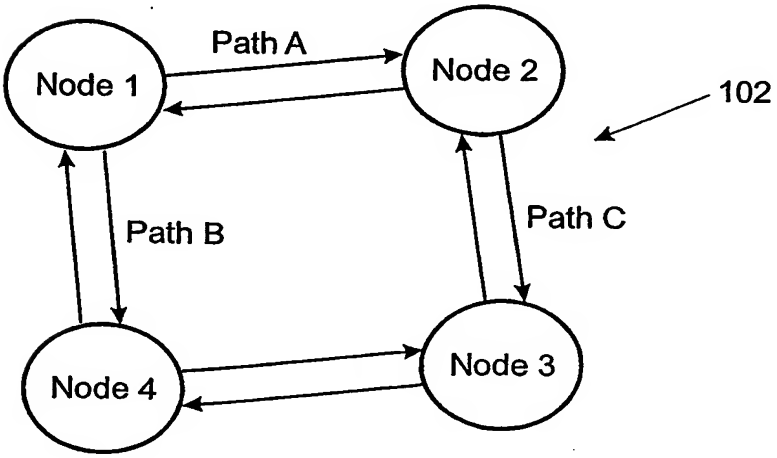


FIGURE 10c

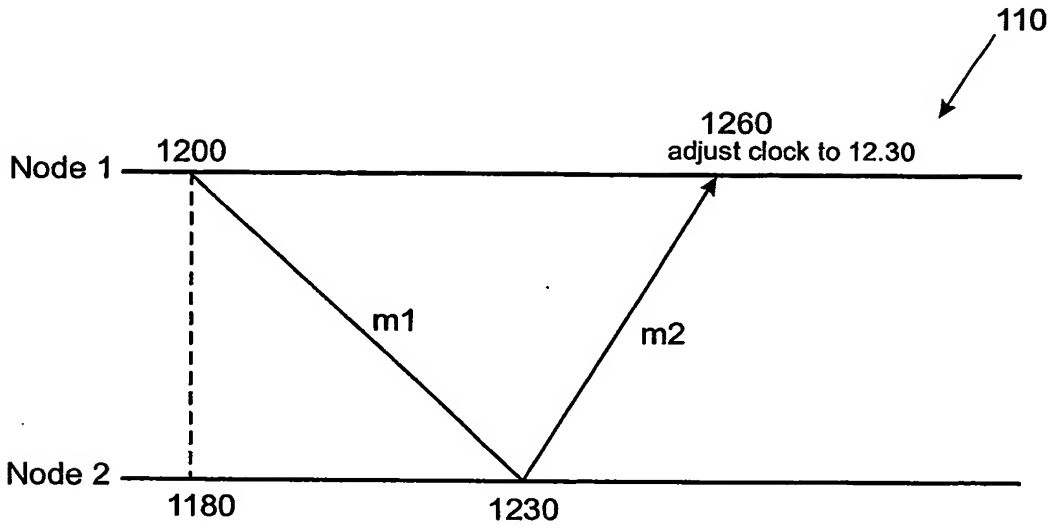


FIGURE 11a

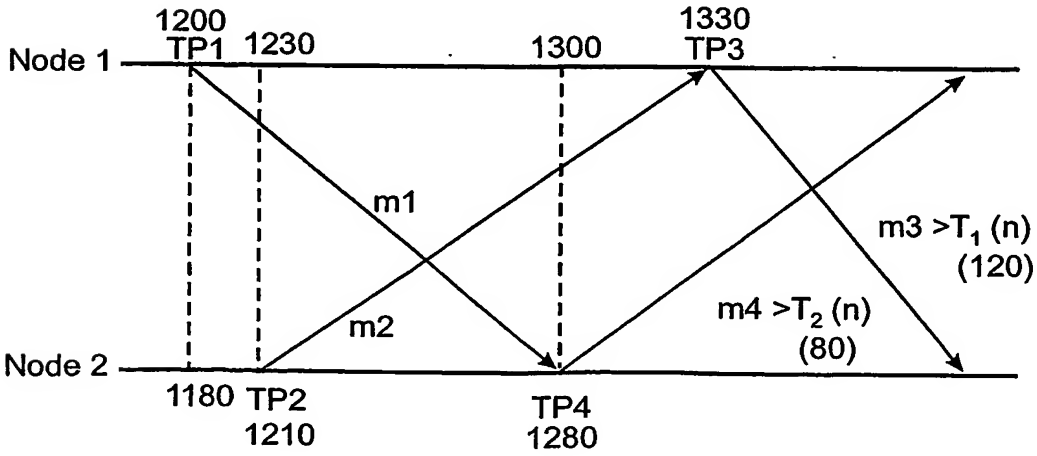


FIGURE 11b

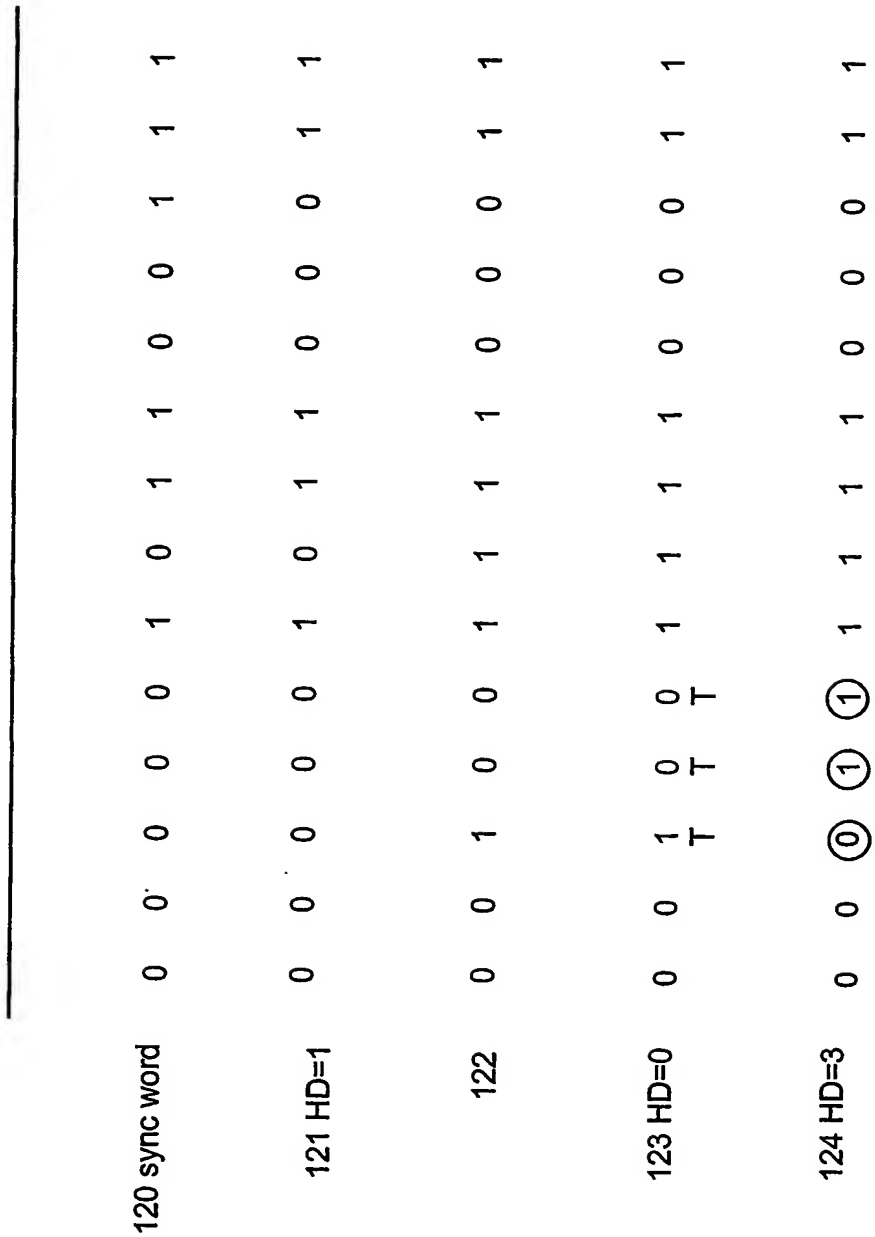

1 2 3 4 5 6 7 8 9 10 11 12 13 14
120 sync word 0 0 0 0 0 1 0 1 1 0 0 1 1 1
121 HD=1 0 0 0 0 0 1 0 1 1 0 0 0 1 1
122 0 0 1 0 0 1 1 1 1 0 0 0 1 1
123 HD=0 0 0 1 0 0 1 1 1 1 0 0 0 1 1
T T T
124 HD=3 0 0 0 1 1 1 1 1 1 0 0 0 1 1
T T T

FIGURE 12

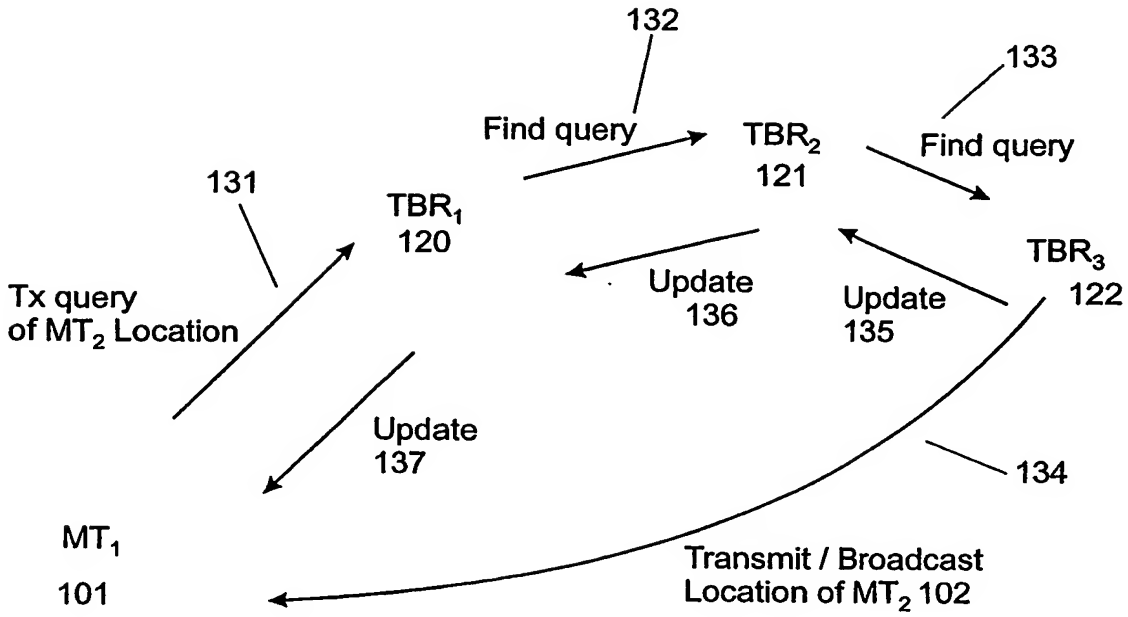

132
Find query
133
Find query
TBR2
121
131
TBR1
120
TBR3
122
Update
136
Update
135
Tx query
of MT2 Location
Update
137
134
MT1
101
Transmit / Broadcast
Location of MT2 102

FIGURE 13

TERMINAL BASE REGISTER

	Src PBS	Dst PBS	Dst SBS1	Dst SBS2
MT_1	BS3 (1)	BS1 (3)	BS2 (4)	BS7 (5)
MT2	BS4 (20)	BS5 (32)	BS6 (31)	BS7 (19)
MT_3	BS6 (19)	BS6 (22)	BS1 (13)	BS2 (4)
MT_x	BS3 (19)	BS4 (25)	BS3 (30)	BS1 (27)

FIGURE 14

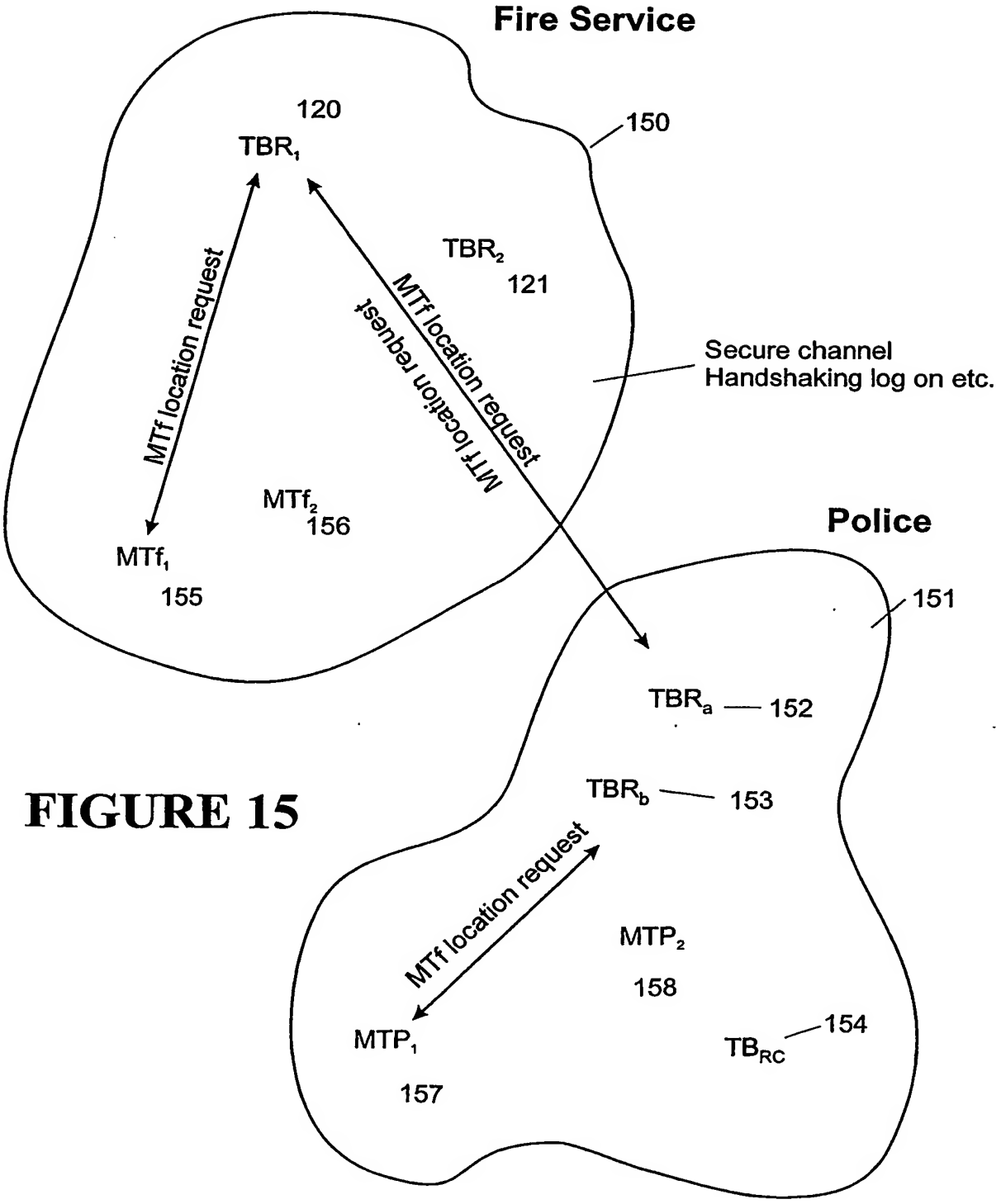

Fire Service
120
TBR1
150
TBR2
121
MTf location request
MTf location request
Secure channel
Handshaking log on etc.
MTf2
156
MTf1
155
Police
151
TBRa
152
TBRb
153
MTf location request
MTP2
158
MTP1
157
154
TBRC

FIGURE 15